

BI-STABLE ELECTROSTATIC COMB DRIVE WITH AUTOMATIC BRAKING

An electrostatic comb drive suitable for micro-electro-mechanical systems ("MEMS") application uses shaped fingers to achieve bi-directional actuation from a uni-polar actuation pulse. The finger shape also provides auto-braking of the movable member of the drive using a simple actuating pulse. In a further embodiment, an end stop inhibits overshoot and a back spring pushes the movable portion of the device back toward an operating position. In yet a further embodiment, a Vernier scale is provided on the movable portion of the drive relative to the fixed portion of the drive to indicate relative shift of these portions after the device is fabricated.

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